



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,166	02/09/2007	Juan Ignacio Valdes Edwards	15807.0005USWO	8919
23552 7590 07/09/2009 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			EXAMINER MCCLAIN-COLEMAN, TYNESHA L.	
			ART UNIT 4132	PAPER NUMBER
			MAIL DATE 07/09/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/579,166	Applicant(s) VALDES EDWARDS, JUAN IGNACIO	
	Examiner TYNESHA MCCLAIN-COLEMAN	Art Unit 4132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008 (Prelim. Amend.).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20070209 and 20070316</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.
3. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.
4. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.
5. The disclosure is objected to because of the following informalities: For line 13 on page 7, it appears that "EVO/EVAH" should be corrected to "EVOH/EVA".
6. The amendment filed 7/25/2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material

Art Unit: 4132

which is not supported by the original disclosure is as follows: In the table found on page 8 of the specification, the units for the permeability to water vapor have been changed from $\text{g/cm}^2\text{-24h}$ to $\text{g/m}^2\text{-24h}$. Applicant has not demonstrated that the error in the chart was obvious and that the correction was obvious.

7. Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The preamble indicates that the process of claim 1 can be used to preserve fish or meat food. Throughout the body of the claim, however, fish is what is apparently being used in the disclosed process. Therefore, it is unclear whether the process is specifically intended for fish only or for both fish and meat products.

11. The terms "clean packing extraction process" (letter i) and "butter chamber" (letter i) found in claim 1 are unclear. The specification fails to define these terms, and a review of the prior art fails to demonstrate that these terms have recognized meaning. Therefore, it is unclear what is the claim scope.

12. Regarding Claim 1, the term "commercial requirements" is unclear. The requirements to be satisfied are uncertain, and the requirements are subject to change.

Art Unit: 4132

13. Regarding Claim 1, step (j), it unclear what scope is claimed by the requirement of "in agreement with users intentions" since it is undefined what users and/or intentions are encompassed.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the table, the units for the permeability to water vapor have been changed from g/cm²-24h to g/m²-24h. Applicant has not demonstrated that the error in the chart was obvious, that it was obvious to amend the table, or that there is otherwise support for the amendment.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 4132

16. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mitsuda et al.* US4396636 (hereinafter "*Mitsuda*") in view of *Mayr et al.* in "Rapid Detection of Meat Spoilage by Measuring Volatile Organic Compounds by Using Proton Transfer Reaction Mass Spectrometry", August 2003, Applied and Environmental Microbiology-Volume 69-Number 8, Pages 4697-4705 (hereinafter "*Mayr*").

17. With respect to claim 1, *Mitsuda* discloses a method for producing frozen-food from a fresh food, such as fish, shellfish, or meat (column 1, lines 4-6). In example 2, three young yellowtails were slaughtered (letter a). From the *Mitsuda* disclosure, it is expected that the fish were washed/cleaned (letter a) and filleted (letter c) during the slaughtering step so that the fish are appropriately prepared for human consumption. In example 2, *Misuda* also discloses that the slaughtered fish were kept in a cooling box with a temperature of -30°C (Example 2, letter b). Then, each fish was subjected to the step of quick chilling by blowing nitrogen gas of -100°C for 10 minutes so that the center became -6°C for each yellowtail (letter d) (column 6, lines 43-60).

18. In example 3 of the *Mitsuda* disclosure, three hyporhamphus were used, and they have previously undergone the step of quick chilling. Next, the temperature of the nitrogen gas blowing onto the food was changed to -30°C and maintained at that level for 40 minutes so that each food is gradually chilled to reach -20°C at its center (letter g). Then, these foods were stored at -18°C for eight months (letter h), with each being packaged by a polyethylene bag (letter e) (column 8, lines 6-11).

Art Unit: 4132

19. From the *Mitsuda* disclosure, it is expected that frozen fish and meat can be defrosted in the refrigerator regardless of where it is stored (i.e. butter compartment, crisper bin, etc.) and should be consumed within 3 days in order to avoid spoilage and a decrease in freshness of the product (letter i)

20. However, *Mitsuda* does not disclose that the fish or meat pieces are packaged in the claimed special packaging (letter e) and does not disclose the claimed high vacuum packaging step (letter f).

21. *Mayr* discloses that meat pieces of beef and pork were vacuum packaged individually (letter f) in vacuum bagging film (polyamide-polyethylene [Packartis]) (letter e) by evacuating the package (97 to 99% vacuum) and sealing (page 3, Packaging and Storage). According to *Mayr*, the shelf life of meat is considerably increased by vacuum packaging instead of air packaging. *Mayr* discloses that when O₂-impermeable packaging is used, the growth of gram-positive bacteria, mostly lactic acid bacteria, is favored because of increased CO₂ levels and a lowered oxidation-reduction potential. These organisms typically cause a decrease in pH and create an unfavorable environment for most food-borne pathogens and gram-negative bacteria. Under aerobic conditions, they cannot compete with gram-negative spoiling organisms due to much longer generation times (Discussion, 2nd paragraph).

22. The polyamide-polyethylene packaging material disclosed by *Mayr* possesses high gas barrier properties (such as oxygen and carbon dioxide), has low water vapor transmission rates, is durable over a wide range of temperatures, and has the ability to

Art Unit: 4132

endure vacuum sealing temperatures (letter e). In addition to this, the packaging material, containing the frozen meat or fish product, can be placed in boiling water before eating (letter j).

23. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the packaging material used by *Mitsuda* with the packaging and vacuum system taught by *Mayr*.

24. One having ordinary skill in the art would have been motivated to do this because vacuum packaging coupled with the use of the polyamide-polyethylene material not only extends the typical shelf life of food, but it also provides anaerobic conditions in within the package. This system minimizes the growth and multiplication of microorganisms, thus allowing the freshness of the meat or fish product to be preserved longer.

25. Regarding claim 2, the polyamide-polyethylene packaging material disclosed by *Mayr* is resistant to odor permeance. As above with the rejection of claim 1, the polyamide-polyethylene packaging material disclosed by *Mayr* also possesses high gas barrier properties (such as oxygen and carbon dioxide) and low water vapor transmission rates. Therefore, it would be expected that the polyamide-polyethylene packaging material disclosed by *Mayr* meets the claimed requirements of high impermeability to gases, water vapor, and many diverse types of odorants.

26. Regarding claim 3, *Mayr* discloses that meat pieces of beef and pork were vacuum packaged individually in vacuum bagging film (polyamide-polyethylene [Packartis]) by evacuating the package (97 to 99% vacuum) and sealing (page 3,

Art Unit: 4132

Packaging and Storage). *Mayr* also discloses the transmission rates of O₂ and CO₂ in the film which are 10 and 35 cm³ m⁻² 24h⁻¹ 10⁵ Pa⁻¹, respectively (page 3, Packaging and Storage) which is converted to 10 and 35 cm³ m⁻² 24h⁻¹ bar.

27. Since the transmission rates of O₂ and CO₂ taught by *Mayr* are within a reasonable range of the permeability ranges disclosed by the applicant, the permeability of nitrogen and water vapor as well as the temperature resistance and sealing temperature ranges of the applicant's packaging material are expected to be analogous to those of the polyamide-polyethelyne packaging material disclosed by *Mayr*. Therefore, it would be expected that the permeabilities to gases, water vapor and temperature resistance values claimed by the applicant are met by the polyamide-polyethylene packaging material disclosed by *Mayr*.

28. With respect to claim 4, the polyamide-polyethylene packaging material disclosed by *Mayr* has excellent resistance to odor and flavor permeance. As above with the rejection of claim 1, the polyamide-polyethylene packaging material disclosed by *Mayr* is also durable over a wide range of temperatures and has the ability to endure vacuum sealing temperatures. Therefore, it would be expected that the packaging material used by *Mayr* does not transmit odors and flavors independently of the temperatures to which they are subjected to, is highly resistant to physical stress and a wide range of temperatures, and is flexible to adapt to surfaces of diverse shapes and textures as claimed by the applicant.

Art Unit: 4132

29. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Mitsuda et al.* US4396636 (hereinafter "*Mitsuda*") in view of *Mayr et al.* in "Rapid Detection of Meat Spoilage by Measuring Volatile Organic Compounds by Using Proton Transfer Reaction Mass Spectrometry", August 2003, Applied and Environmental Microbiology-Volume 69-Number 8, Pages 4697-4705 (hereinafter "*Mayr*") in further view of *Weerawardena et al.* GB 2360690 (hereinafter "*Weerawardena*"). *Mitsuda* in view of *Mayr* is relied upon as above with the rejection of claim 1.

30. *Mitsuda* in view of *Mayr* discloses a method for producing frozen-food from a fresh food, such as fish, shellfish, or meat (column 1, lines 4-6), and vacuum sealing the fish or meat product (page 3, Packaging and Storage). However, *Mitsuda* in view of *Mayr* does not disclose that the process is carried out in an industrial facility.

31. *Weerawardena* discloses an installation for preparing sliced fish or meat materials, including a continuous freezing conveyor for cryogenically freezing the sliced material from the cutting machine within a predetermined time (page 5, lines 27-30). More preferably, the slices are passed along a cryogenic freezing line, e.g. a tunnel having a conveyor which carries the sliced material past sprays or other arrangements for surface contact with cryogenic material such as nitrogen (page 5, lines 12-16). Preferably, it also includes a packaging machine downstream of the cryogenic freezing arrangement (page 5, lines 30-32). Typically, the frozen slices are packaged directly on issue from the cryogenic tunnel, either interleaved on trays, vacuum packed, or in loose or pillow packs (page 8, line 17-19). Also, other preferred or optional features of the

Art Unit: 4132

installation and apparatus appear from the method description above, as do suitable operating temperatures and temperature differences which the system may be adapted or programmed to maintain (page 6, lines 1-4).

32. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to introduce the installation taught by *Weerawardenal* to the production of frozen fish and meat taught by *Mitsuda* in view of *Mayr*.

33. One of ordinary skill in the art would have been motivated to do this because the facility would provide continuous processing of the frozen meat or fish in one convenient location. Transporting the product from one location to another in between steps may cause the fish or meat to rise to a temperature at which deterioration and discoloration could occur.

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TYNESHA MCCLAIN-COLEMAN whose telephone number is (571)270-1153. The examiner can normally be reached on Monday - Thursday 7:30AM - 5:00PM Eastern Time.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lavilla can be reached on (571)272-1539. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4132

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T.L.M.C./
TYNESA L MCCLAIN-COLEMAN
Patent Examiner, Art Unit 4132
1 July 2009

**/Michael La Villa/
Michael La Villa
Supervisory Patent Examiner, Art Unit 4132
2 July 2009**